

REMARKS

I. STATUS OF CLAIMS

Applicant has amended claim 20. Support for the claim amendment can be found in the as-filed specification, e.g., the Examples shown in Tables 1-4, of the as-filed specification. No new matter has been introduced. Claims 20-27 are pending.

II. PRIOR ART REJECTIONS

The Office Action rejected claims 20-27 under 35 U.S.C. § 103(a) over U.S. Patent No. 6,300,292 to Konishi et al. ("Konishi") in view of U.S. Patent Application Publication No. 2002/0035043 to Yokota et al. ("Yokota"). Applicant respectfully requests reconsideration and withdrawal of the rejection for at least the following reasons.

Amended independent claim 20 recites, among other things, "a phosphoric acid ester of 2.0-5.0% by mass based on the total amount of the oil; a sulfidized ester of 3.0-10.0% by mass based on the total amount of the oil."

Neither Konishi nor Yokota discloses or suggests at least the above-quoted features recited in claim 20. Konishi, in particular, does not disclose or suggest "a phosphoric acid ester of 2.0-5.0% by mass based on the total amount of the oil," and instead discloses phosphates in 0.0.1 to 1% by mass. Konishi, col. 11, lines 25-34. As acknowledged in the Office Action at page 4, Konishi also neither discloses nor suggests "a sulfidized ester of 3.0-10.0% by mass based on the total amount of the oil." Yokota does not remedy the deficiencies of Konishi. Yokota at paragraph [0048] discloses sulfides of unsaturated carboxylic acids such as sulfides of oleic acid; however, Yokota does not disclose or suggest a sulfurized ester, nor a combination of a

phosphoric acid ester and a sulfurized ester within the claimed ranges. Further, there is no suggestion in Konishi and Yokota, or recognition of any need, to provide a combination of a phosphoric acid ester and a sulfurized ester to its disclosed oil composition.

These elements of the claimed compound are not a combination of prior art elements according to known methods to yield predictable results, nor a simple substitution of known elements for others to obtain predictable results, nor an application of a known technique to improve a similar device or method in the same way, nor a choice from a finite number of identified, predictable solutions with a reasonable expectation of success. See M.P.E.P. § 2143.

Furthermore, a reasonable expectation of success is required to support a conclusion of obviousness. M.P.E.P. § 2143.02. In order to have a reasonable expectation of success, at least some degree of predictability is required. M.P.E.P. § 2143.02(II). Applicant respectfully submits that the refrigerating machine oil as recited in claim 20 shows unexpected beneficial results that were neither achieved nor predicted in the cited references. See *also* Applicant's previous arguments in the Reply to Office Action filed December 14, 2010, pages 7-8.

In response to the Office Action's assertions on pages 6-7, Applicant respectfully submits that claim 20 is commensurate in scope with the Examples of the claimed oil composition disclosed in the as-filed specification. In particular, the content of the triester of fatty acids and glycerin, phosphoric acid ester, and sulfidized ester, and optional additives in the oil composition; the content of oleic acid and linoleic acid in the fatty acids of the triester, the kinematic viscosity at 40°C, the total degree of

unsaturation of the triester, the viscosity index, as recited in claim 20 are particularly set forth in view of the scope of Examples 6, 17, and 18, in Tables 1, 2, and 4 of the as-filed specification. M.P.E.P. 2145 (When considering whether proffered evidence is commensurate in scope with the claimed invention, Office personnel should not require the applicant to show unexpected results over the entire range of properties possessed by a chemical compound or composition).

Examples 6, 17, and 18, containing a combination of a phosphoric acid ester and a sulfurized ester, as recited in claim 20, showed marked improvements in abrasion resistance from the synergistic effect of the combination of a phosphoric acid ester and a sulfurized ester, as compared to all other examples that do not contain a combination of a phosphoric acid ester and a sulfurized ester, regardless of the presence of additional additives. See Tables 2 and 4 of the as-filed specification. These unexpected beneficial results were neither achieved nor predicted by Konishi or Yokata. As noted above, neither of the references discloses or suggests the combination of phosphorothionate and phosphoric acid ester as claimed. In the absence of this feature, neither Konishi nor Yokata would lead one of ordinary skill in the art to arrive at the claimed invention and predicted the above-discussed beneficial results. Further, absent such teachings in the cited references, use of the claimed oil would not have been one of a finite number of predictable solutions to solve the pertinent problems in oils for metal working, nor a simple substitution of one known element for another to obtain predictable results. See M.P.E.P. § 2143.

For at least the above reasons, amended claim 20 is not obvious over the cited references. Claims 21-27 depend from claim 20 and incorporate all of the features of

claim 20. Claims 21-27, therefore, also are not obvious at least due to their respective dependence from amended claim 20.

III. CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration of this application and timely allowance of the pending claims.

The Examiner is invited to contact Applicant's representative at (202) 408-4457 if there are any remaining issues.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account no. 06-0916.

Respectfully submitted,

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